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SEQUENCE LISTING

TECH CENTER 1600/2900

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<120> ANIMAL MODELS AND METHODS FOR ANALYSIS OF LIPID METABOLISM AND SCREENING  
OF PHARMACEUTICAL AND PESTICIDAL AGENTS THAT MODULATE LIPID METABOLISM

<130> 7326-101, EX99-004

<140> 09/332,522

<141> 1999-06-14

<160> 95

<170> PatentIn version 3.1

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Gln Cys Ala Ala Ile Leu Thr Asn Glu Lys Asp Glu Ser Ala Lys Phe  
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Gly Thr Trp Ile Ser Arg Asn Gly Asp Ala Cys Cys Thr Trp Trp Thr  
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Ala Arg Gln His Tyr Ser Leu Ile Arg Asn Cys Pro Pro Lys Ile Leu  
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Ala Gly Asn Ser Cys Thr Arg Arg Val Met Ile Thr Ser Phe Asn Val  
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Glu Thr Gly Ser Gly Ser Leu Ser Trp His Ser Leu Asn Thr Ser Ser  
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Thr Thr Pro Gln Glu Pro His Pro Ser Gly Glu Pro Trp Pro Pro Glu  
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Pro Gln Val Leu Asn Ser Ser Thr Thr Asp Arg Ser Pro Pro Pro Leu  
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Leu Pro Trp Ala Gln Ser Ser Pro Ala Phe Phe Tyr Val Gln Gln Ile  
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Thr Leu Arg Thr Ser Val Leu Pro Trp Thr Glu Gly Met Gln Leu Met  
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Asp Ala Phe Arg Ala Pro Leu His Glu Val Phe Lys Leu Leu Glu Ile  
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Val Arg Asn His Gln Ser Ser Glu Asn Lys Arg Thr Leu Glu His Asn  
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Cys Leu His Val Asp Asn Val Lys Arg Gly Thr His Gly Gln Leu Asp  
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Trp Thr Gln Asn Ser Gln Asn Phe Thr Arg Asp Thr Asn Ile Leu Asn  
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Thr Ile Phe Gln Tyr His Asn Leu Gln Lys Ser Lys Val Ser Ala Ala  
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Glu Met Leu Phe Gly Leu Pro Met Gln Asp Thr Gly Phe Lys Arg Tyr  
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Pro Leu Arg Ala Arg Ser Arg Ile Ile Gln Tyr Ala Leu Thr Leu Phe  
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Leu Arg His Tyr Pro Pro Leu Pro Leu Ala Ser Ala Ser Ala Glu Glu  
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Glu Leu Val Pro Tyr Thr Val Ala Phe Met Leu Val Phe Ala Tyr Val  
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Tyr Phe Ser Val Arg Lys Ile Asp Val Phe Arg Ser Arg Phe Leu Leu  
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Ile Phe Pro Tyr Leu Val Ile Leu Val Gly Leu Glu Asn Ser Leu Val  
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Ile Thr Lys Ser Val Val Ser Met Asp Glu Thr Phe Asp Val Lys Ile  
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Arg Val Ala Gln Ala Leu Ser Lys Glu Gly Trp His Ile Ser Lys Thr  
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Pro Val Ile Gln Glu Phe Cys Ile Phe Ala Ile Val Gly Leu Leu Ser  
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Ile Lys Arg Thr Glu Tyr Thr Ala Glu Ala Lys His Leu Pro Lys Met  
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Gln Arg Ala Phe Met Ile Trp Met Ile Val Trp Ile Cys Ser Ile Val



Ile Cys Thr Arg Asn Tyr Ala Glu Trp Arg Ser Ser Trp His Glu Ser  
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Glu Ala Pro Tyr Lys Gln Thr Glu Gln Ile Leu Glu Gly Val Pro Thr  
805 810 815

Gln Ile Ala Gly His Lys His Arg Ile Glu Cys Leu Val Ser Asp Gly  
820 825 830

Ala Tyr Ile Ile Ser Cys Cys Leu Lys Gly Gln Ile Arg Val Trp Asp  
835 840 845

Ala Arg Ser Gly Glu Gln Leu Thr Ser Ile Ser Arg Ser Asp Ile Gln  
850 855 860

Ile Ser Gln Gln Arg Thr Asp Gly Gln Thr Leu Val Arg Lys Leu Ala  
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Val Ser Pro Val Trp Cys Leu Asp Tyr Phe Asp Asn Leu Ile Ala Val  
885 890 895

Gly Cys Ala Asn Gly Arg Val Glu Leu Trp Glu Ser Pro Ala Gly Leu  
900 905 910

Leu Lys Cys Ala Tyr Gln Glu Asp Ala Lys Arg Asn Gln Gly Ile Thr  
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His Ile His Leu Asn Gly Asp Arg Val Ile Val Ala Arg Leu Asn Gly  
930 935 940

Arg Leu Asp Phe Tyr Arg Leu Glu Thr Tyr Tyr Lys Gly Lys Gln Ile  
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Asp Trp Gly Phe Thr Ser Ala Tyr Arg Arg Thr His Val Arg Thr Gly  
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Ser Thr Gly Ser Leu Gly Leu Met Leu Gln Gln Gln Arg Cys Gln Gln  
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Glu Ala Ser Gln Lys Thr Thr Lys Glu Glu Met Lys Ile Thr Leu Glu  
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Gly Val Arg Leu Ala His Gln Gln Pro Ile Thr Cys Met Gln Val  
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Val Tyr Cys Leu Asn Lys Ser Asp Val Glu Tyr Thr Leu His Gly  
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Pro Thr Gln Met Tyr Asn Met Leu Leu Asp Glu Pro Arg Thr His Thr  
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Gln Gln Thr Gln Ser Val Asp Gln Gln Pro Gln Ser Val Glu Gln Gln  
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Pro His Val Lys Ser Glu His Ser Ser Pro Val His Ile Lys Glu Glu  
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Leu His Gln Gln Gln Gln Ser Pro Leu Leu Val Tyr Lys Pro Asp  
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Pro Leu Ile Ala Thr Ser Tyr Asn Cys Pro Gln Gln Gln Pro Thr Gly  
115 120 125

Leu Leu Lys Ala Ala Gln Pro Thr Ala Thr Ile His His Met Asp Ala  
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Ser Phe Val Tyr Gln Ser Met Ser Pro Pro Thr Ser Pro Val Glu Ser  
165 170 175

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Pro Ala Ser Ala Pro Leu Pro Gln Gln Ser Tyr Pro Gln Pro Phe Ile  
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Thr Tyr Asn Ser Lys Ala Gly Met Thr Ser Asp Glu Ala Met Tyr Leu  
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Ile Asn Arg Val Gln Pro Lys Val Lys Glu Val Lys Arg Ser Ala His  
275 280 285



Asn Ala Ile Glu Arg Arg Tyr Arg Thr Ser Ile Asn Asp Lys Ile Asn  
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Glu Leu Lys Asn Leu Val Val Gly Glu Gln Ala Lys Leu Asn Lys Ser  
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Ala Val Leu Arg Lys Ser Ile Asp Lys Ile Arg Asp Leu Gln Arg Gln  
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Asn His Asp Leu Lys Ala Glu Leu Gln Arg Leu Gln Arg Glu Leu Met  
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Leu Ser Pro Met His Ser Asp Ile Ser Leu Pro Pro Ser Pro Tyr Gly  
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Pro Leu Val Val Pro Ser Ser Met Arg Gly Met Ala Thr His Ser Arg  
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Leu Gly Leu Cys Met Phe Met Phe Ala Ile Leu Ala Val Asn Pro Phe  
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Gly Phe Ala Val Trp Gln Gln Ser Ser Trp Ile Trp Leu Leu Asn Phe



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Asn Pro Cys Asp Pro Ala Ala His Val Ile Lys Gln Tyr Arg Glu His  
755 760 765

Leu Leu Phe Lys Ser Ile Gln Cys Leu Val Gly Ala Gly His Lys Ser  
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Gly Gly Leu Pro Thr Ser Ser Val Ser Gly Glu Ala Glu Gln Leu Gln  
785 790 795 800

Gln Gln Gln His Ser Gly Thr Ile Val Ser Asn Val Leu Lys Tyr Thr  
805 810 815

Ser Leu Leu Lys Asp Thr Leu Trp Ala Asp Glu Asp Glu Arg Asp Thr  
820 825 830

Asn Val Val Trp Trp Ala Asp Val Leu Glu Thr Ala Val His Trp Leu  
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Leu Gly Glu Asp Thr Leu Ala Glu Gln Leu Tyr Gly Arg Ile Lys Gln  
850 855 860

Met Pro Thr Gln Leu Gln Gln Cys Gly Glu Asn Asp His Leu Pro Lys  
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Ala Leu His Ala Val Leu Arg Ala Lys Met Ile Leu Leu Lys Asn Asn  
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Gly Asn Ala Leu Asp Lys Ser Leu Lys Gln Leu Val Asn Ile Leu Cys  
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Asp Glu Ser Ser Val Glu Leu Gln Glu Cys Leu Thr Val Asn Arg Ile  
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Thr Asp Ala Lys Gly Ile Lys Leu Leu Phe Gln Leu Leu Thr Cys Asp  
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Trp Leu Leu Glu Thr Arg Thr Ala Leu Trp Glu Leu Glu His Met Asn  
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Met Glu Asp Asp Gly Phe Tyr Gln Val Pro Gly Glu Val Leu Glu Lys  
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Phe Gln Thr Asp Leu Asn Ser Leu Arg Asn Ile Val Glu Asn Ile Pro  
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Asn Ala Gln Ser Arg Ile Tyr Leu Tyr Glu Ala Val Cys Arg Leu Met  
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Trp Ser Glu His Leu His Val Asn Asp Lys Ile Ala Pro Phe Trp Ile  
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Ile Ser Pro Trp Asn Ala Thr Glu Met Gly Pro Glu His Ala Val Arg  
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Pro Ala Val Glu Glu Leu Cys Leu Arg Leu Ala Asn Gln Arg Gln Asp  
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Arg Asp Leu Leu Leu Gly Ala Pro Ile Ala Ala Thr Gly Ile Lys Gln  
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Lys Tyr Gln Thr Asn Arg Lys Arg Lys Ile Glu Phe Ala Val Thr Met  
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Phe Phe Ala Arg Tyr Ser Lys Lys Val Ile Gln Gly Ile Arg Glu Lys



Glu Glu Ile Pro Arg Leu Lys Asn Tyr Ala Pro Val Ser Cys Pro Met  
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Glu Tyr Asn Ile Ser Leu Asn Ser Arg Tyr Val Thr Phe Leu Pro Pro  
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Val Glu Lys Thr His Val Asn Val Pro Asn Glu Glu Glu Asp Ala Pro  
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Ile Leu Arg Ser Arg Ile Asp Trp Leu Glu Met Gln Leu Lys Met Tyr  
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Leu Ala Ala Phe Trp Leu Leu Leu Ile Thr Thr Val Ile Ser Phe Phe  
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Ala Tyr Val Phe Leu Ile Asp Arg Trp Lys Leu Arg Gly Val Lys Gln  
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Ile Gln Glu Gln Gln Met Ser Glu Thr Thr Thr Asp Ser Ser Glu Thr  
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Val Lys Asn Phe Val Asp Thr Leu Pro Ile Val Tyr Gln Gly His Arg  
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Phe Pro Ile Glu Ser Val Ala Ile Asp Pro Glu Asp Thr Ser Thr Phe  
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Val Ser Cys Cys Gln Glu Gly Val Val Tyr Val Trp Asn Thr Gln Thr  
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Gly Gln Arg Thr Leu Arg Ile Asn Arg Leu Arg Ala Val Pro Glu Lys  
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Gly Lys Glu Ile Pro Ser Ala Pro Lys Ile Trp Ala Ile Ala Lys Arg  
755 760 765

His Phe Phe Ser Asn Thr Thr Ser His Val Val Cys Arg Glu Asp Asp  
770 775 780

Val Ala Val Val Arg Leu Asp Gly Ser Ile Glu Phe Leu Arg Ile Asp  
785 790 795 800

Tyr Asp Arg Thr Asp Gly Thr Ile Arg Val Arg Lys Ile Glu Leu Leu  
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Lys Ser Val Arg Ala His Gln Lys Pro Val Cys Arg Ile Ala Ile Trp  
820 825 830

Lys Ser Gln Leu Ile Thr Ser Ser Phe Asp Arg Ser Ile Lys Met Trp  
835 840 845

Asn Trp Ala Glu Asn Pro Glu Gln Ile Asp Ile Ser Asn Val Phe Leu  
850 855 860

Ala His Asn Ser Pro Val Val Asn Leu Ala Val Asp Glu Ala Thr Ser  
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Ile Met Tyr Ser Ser Cys Glu Glu Gly Val Ile Cys Trp Trp Asn Leu  
885 890 895

Asn Thr Gly Glu Leu Ile Arg Thr Asn Asp Asn Asn Tyr Thr Trp Ala  
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Val Lys Ser Val Asp Glu Cys  
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